APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,103	11/14/2003	Scott David D'Souza	3464-Z	8220

7590 05/29/2007

Law Office of Jim Zegeer
Suite 108
801 North Pitt Street
Alexandria, VA 22314

EXAMINER
CHAI, LONGBIT

ART UNIT	PAPER NUMBER
2131	

MAIL DATE	DELIVERY MODE
05/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/712,103	D'SOUZA ET AL.
	Examiner	Art Unit	
	Longbit Chai	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _4/16/2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24_ is/are pending in the application.

    4a) Of the above claim(s) _19-24_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-18_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _14 November 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☒ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _3/12/2007_ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Priority

1.   No claim for priority has been made in this application.

The effective filing date for the subject matter defined in the pending claims in this

application is 11/14/2003.

Election of Restriction Requirement

2.   Applicant's election of <u>Group I</u> filed on 4/16/2007 with respect to restriction

requirement mailed on 3/15/2007 is acknowledged and accordingly, this Office Action

only addresses the claimed inventions of Group I as elected by Applicant. The elected

claims of Group I includes claims 1 – 18.

Claim Objection

3.   Claims 1 and 10 are objected because the claim language "n • 2 in dependence

upon a source address" should be "n ≥ 2 in dependence upon a source address". This

is supported by its CIP (Continuous-in-part) of application number 10/440,233 on Page

4 Line 11 – 12 and was confirmed by Attorney John Granchelli during a phone interview

on 3/12/2007. Appropriate corrections are required.

4.   Claims 1 and 10 are objected because the claim language "<u>the</u> level of trust"

should be "a level of trust". Appropriate corrections are required.

5.   Claims 5 and 14 are objected because the claim language "the different tables"

should be "different tables". Appropriate corrections are required.

6.   Claims 6 and 15 are objected because the claim language "the same source

address" should be "a same source address". Appropriate corrections are required.

7.   Claims 7 and 16 are objected because the claim language (a) "the priority of the

destination address" should be "a priority of a destination address" (b) "the appropriate

tables" should be "appropriate tables". Appropriate corrections are required.

8.   Claims 8 and 17 are objected because the claim language (a) "the priority of the

destination address" should be "a priority of a destination address" (b) "the tables in

accordance with the time that each of the entries has existed in those tables" should be

"the tables in accordance with a time that each of the entries has existed in those

tables". Appropriate corrections are required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

9.   Claims 1 and 10 are indefinite because the claimed recitation of "a decision

engine" and "a scheduler" is not disclosed throughout the entire specification regarding

its implementation as being a hardware functional entity or a software functional entity

or a combination – according to the specification, the traffic analyzer, as shown in

Figure 2, includes a decision engine, one or more source address tables, and a

scheduler (SPEC: Page 6 Line 25 – 27); however, each of component functionalities as

a hardware entity or a software entity or a combination is unknown throughout the entire

specification.

Accordingly, claims 1 and 10 are <u>also</u> rejected under 35 U.S.C. 101 because the

claim is directed as an "apparatus" claim; but the claimed subject matters may be

reasonably interpreted as being not limited to any <u>hardware</u> element and thereby is not

a proper apparatus claim under 35 U.S.C. 101 that needs to include, at least, one

hardware element.

All dependent claims are rejected to as having the same deficiencies as the

claims they depend from.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its

support in the language of 35 U.S.C. 101 which states that "whoever invents or

discovers any new and useful process ... may obtain <u>a</u> patent therefor ..." (Emphasis

added). Thus, the term "same invention," in this context, means an invention drawn to

identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re

Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164

USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by

canceling or **amending the conflicting claims** so they are no longer coextensive in

scope. The filing of a terminal disclaimer <u>cannot</u> overcome a double patenting rejection

based upon 35 U.S.C. 101.

Claims 1 – 18 are provisionally rejected under 35 U.S.C. 101 as claiming the

same invention as that of claim 1 – 18 of copending Application No. 10/712,103. This is

a <u>provisional</u> double patenting rejection since the conflicting claims have not in fact

been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraph of 35 U.S.C. 102 that

forms the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10.   Claims 1 – 2 and 10 – 11 are rejected under 35 U.S.C. 102(b) as being

anticipated by Gai et al. (U.S. Patent 6,167,445).

As per claim 1, Gai teaches an an apparatus for providing priority queuing to

packets at a network device in a communications network (Gai: Column 4 Line 14 – 20

and Column 9 Line 36 – 47: priority queues are used for managing network congestion

control), comprising:

(i) a decision engine (Gai: Figure 5 / Element 512 and Column 10 Line 24 – 34:

traffic management controller is qualified as a decision engine), at the network device,

for receiving packets from the communications network and queuing each of the

packets in an available queue wherein n queues are available and n ≥ 2 (Gai: Figure 5 /

Element 520, 522 & 532 and Column 10 Line 24 – 34 and Column 9 Line 41 – 43:

multiple priority queues are used) in dependence upon a source address of the packet

(Gai: Column 6 Line 27 – 30 / Line 48 – 57, Column 15 Line 50 – 54 and Figure 7C /

Element 742 & 746: classification rules are used to associate differentiated services

(DS) or quality of service (QoS) with different priorities of traffic management that

corresponds QoS level to packets based on their source or destination addresses);

(ii) a scheduler (Gai: Figure 5 / Element 522 Column 10 Line 27 – 34) for de-

queuing packets from the queues for transmission to the network device wherein

packets from the queue are de-queued at different rates depending on the level of trust

associated to the source addresses (Gai: Column 2 Line 54 – 57, Column 6 Line 27 –

30 / Line 48 – 57, Column 15 Line 50 – 54 and Figure 7C / Element 742 & 746: (a)

priority queues are used to traverse the packets at different speeds into the network (b)

classification rules are used to associate differentiated services (DS) or quality of

service (QoS) with different priorities of traffic management that corresponds QoS level

to packets based on their source or destination addresses).

As per claim 10, Gai teaches a method of providing priority queuing to packets at

a network device in a communications network (Gai: Column 4 Line 14 – 20 and

Column 9 Line 36 – 47: priority queues are used for managing network congestion

control), the method comprising:

(i) receiving packets from the communications network in a decision module (Gai: Figure 5 / Element 512 and Column 10 Line 24 – 34: traffic management controller is qualified as a decision module) at the network device, and queuing each of the packets in an available queue wherein n queues are available and n > 2 (Gai: Figure 5 / Element 520, 522 & 532 and Column 10 Line 24 – 34 and Column 9 Line 41 – 43: multiple priority queues are used) in dependence upon a source address of the packet (Gai: Column 6 Line 27 – 30 / Line 48 – 57, Column 15 Line 50 – 54 and Figure 7C / Element 742 & 746: classification rules are used to associate differentiated services (DS) or quality of service (QoS) with different priorities of traffic management and further assigns QoS to packets based on their source or destination addresses); and

(ii) de-queuing packets from the queues for transmission to the network device wherein packets from the queues are de-queued at different rates depending on a level of trust associated to the source addresses (Gai: Figure 5 / Element 520, 522 & 532, Column 2 Line 54 – 57, Column 6 Line 27 – 30 / Line 48 – 57, Column 15 Line 50 – 54 and Figure 7C / Element 742 & 746: (a) priority queues are used to traverse the packets at different speeds into the network (b) classification rules are used to associate differentiated services (DS) or quality of service (QoS) with different priorities of traffic management that corresponds QoS level to packets based on their source or destination addresses).

As per claim 2 and 11, Gai teaches the network device is a local area network (LAN) (Gai: Column 1 Line 29 – 40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.   Claims 3 – 6, 8, 9, 12 – 15, 17 and 18 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Gai et al. (U.S. Patent 6,167,445), in view of Brock et al. (U.S.

Patent 2003/0110393).

As per claim 3 and 12, Gai teaches each of said n queues has an associated

classification of ranking with the source address of packets (Gai: Column 15 Line 50 –

54 and Figure 7C / Element 742 & 746, Column 6 Line 27 – 30 / Line 48 – 57).

However, Gai does not disclose expressly each of said n queues has an associated

table with source addresses.

Brock teaches each of said n queues has an associated table with source

addresses ((a) Brock: Para [0009], Para [0028], Para [0012] Line 5 – 7, Para [0015]

Line 10 – 25 and Para [0032]: by monitoring the source address to prevent the denial of

service attacks, a plurality of signature tables are created and ranked (with different

classifications) based on likelihood of occurrence of malicious source devices and a null

signature is added into the signature tables corresponding to non-malicious devices

indicating no threat to the protected device and (b) Gai: Column 6 Line 27 – 30 / Line 48

– 57, Column 15 Line 50 – 54 and Figure 7C / Element 742 & 746: Gai teaches

classification rules are used to associate different ranking (i.e. different classifications)

with different priorities of queues that corresponds QoS level to packets based on their

source addresses and thereby obviously, each of the n queues has an associated table

with source addresses).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to combine the teaching of Brock within the system of Gai because

(a) Gai teaches providing a mechanism to effectively allocate network resources and

services when greater demands are being placed on the TCP-based network by using

classification rules to associate different ranking (i.e. different classifications) that

corresponds QoS level to packets based on their source or destination addresses for

intrusion detection systems (Gai: Column 5 Line 29 – 33, Column 6 Line 27 – 30 / Line

48 – 57, Column 15 Line 50 – 54 and Figure 7C / Element 742 & 746) and (b) Brock

teaches maximizing efficiency, in a denial of service prevention system, by monitoring

the source address to prevent the denial of service attacks, a plurality of signature

tables are created and ranked (with different classifications) based on likelihood of

occurrence of malicious source devices and a null signature is added into the signature

tables corresponding to non-malicious devices indicating no threat to the protected

device because the vast majority of system events may pose no threat to the protected

device so that the system latency can be significantly decreased (Brock: Para [0012]

Line 1 – 7, Para [0009], Para [0028], Para [0012] Line 5 – 7, Para [0015] Line 10 – 25

and Para [0032]).

As per claim 4 and 13, Gai as modified teaches said n associated tables have relative priority levels ranging from legitimate to unknown (Brock: Para [0032], Para [0015] Line 10 – 25, Para [0009] and Para [0028] Line 11 – 14 & Gai: Figure 7C / Element 742 & 746: monitoring the source address and creating a friend / good signature table corresponding to non-malicious devices with null signature indicating no threat to the protected device (considered as legitimate source ranking) and the source addresses to be blocked or filtered with least ranking of trusts are considered as an unknown / unauthorized source ranking).

As per claim 5 and 14, Gai as modified teaches certain legitimate source addresses can be pre-provisioned into the different tables according to their relative priorities (Brock: Para [00031] Line 5 – 11, Para [0009] and Para [0028] Line 11 – 14 & Gai: Figure 7C / Element 742 & 746: pre-provisioned into different signature tables by the 3rd party of manufacturer).

As per claim 6 and 15, Gai as modified teaches means to count source addresses and to place source addresses in a table having a legitimate classification after receiving N packets with the same source address, where N is a positive integer (Brock: Para [0015] Line 4 – 20 and Para [0009]: the source device does not pose threat to the protected device is added into the signature table and the occurrence data N must be positive (i.e. at least occur once) to meet the claim language).

As per claim 8 and 17, Gai as modified teaches the decision engine is operable

to remove entries from the tables in accordance with the time that each of the entries

has existed in those tables (Brock: Para [0015], Page 2, Right Column, Line 4 – 10: a

null signature (i.e. an associated good / friend source device) may be removed after the

expiration of a predetermined interval of time during which the associated signature

event has not been detected, or after simply after a predetermined time).

As per claim 9 and 18, Gai as modified teaches the decision engine is operable

to discard packets from the queues in accordance with a RED (Random Early Drop)

algorithm (Gai: Column 4 Line 35 – 40).

12.   Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gai et al. (U.S. Patent 6,167,445), in view of Brock et al. (U.S. Patent 2003/0110393),

and in view of Devarakonda et al. (U.S. Patent 2001/0052024).

As per claim 7 and 16, Gai teaches each of said n queues has an associated

classification of ranking with the destination address (besides the source address) of

packets (Gai: Column 15 Line 50 – 54 and Figure 7C / Element 742 & 746, Column 6

Line 27 – 30 / Line 48 – 57). However, Gai does not disclose expressly an outgoing

packet monitor to recognize TCP FIN packets and to instruct the decision engine to

update the priority of the destination address of these TCP FIN packets and to put these

addresses into the appropriate tables.

Devarakonda teaches an outgoing packet monitor to recognize TCP FIN packets

and to instruct the decision engine to update the priority of the destination address of

these TCP FIN packets and to put these addresses into the appropriate tables ((a)

Devarakonda: Para [0026] Line 4 – 9 and Para [0027] Line 1 – 3: an affinity table (i.e.

good table) is maintained upon the TCP FIN packet indicating the connection is closed

and the affinity table includes the client, proxy, and the server node IP address

(obviously including source and destination addresses) and (b) Gai: Column 15 Line 50

– 54, Column 6 Line 27 – 30 / Line 48 – 57 and Figure 7C / Element 742 & 746: Gai

teaches classification rules are used to associate different ranking (i.e. different

classifications) with different priorities of queues that corresponds QoS level to packets

based on their destination addresses and thereby obviously, an outgoing packet monitor

to recognize TCP FIN packets and to instruct the decision engine to update the priority

of the destination address of these TCP FIN packets and to put these addresses into

the appropriate tables).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to combine the teaching of Devarakonda within the system of Gai

because (a) Gai teaches providing a mechanism to effectively allocate network

resources and services when greater demands are being placed on the TCP-based

network by using classification rules to associate different ranking (i.e. different

classifications) that corresponds QoS level to packets based on their source or

destination addresses for intrusion detection systems (Gai: Column 5 Line 29 – 33,

Column 6 Line 27 – 30 / Line 48 – 57, Column 15 Line 50 – 54 and Figure 7C / Element

742 & 746) and (b) Devarakonda teaches improving efficiency, in a TCP-based routing network, by providing an affinity table (i.e. good table) is maintained upon the TCP FIN packet indicating the connection is closed and the affinity table includes the client, proxy, and the server node IP address (obviously including source and destination addresses) so that the overhead for affinity routing and load balancing can be minimized (Devarakonda: Para [0020], Para [0026] Line 4 – 9 and Para [0027] Line 1 – 3).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Longbit Chai, Ph.D.
Patent Examiner
Art Unit 2131
4/8/2007